

No.

200400205



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Kansas Agricultural Experiment Station

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR PLANT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED, AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1261, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

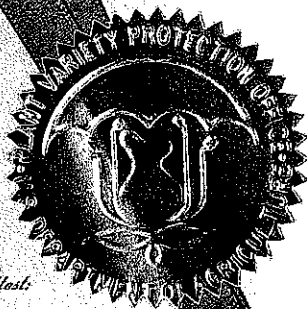
'Overley'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this twentieth day of July, in the year two thousand and four.

Attest:

Alm J. G.
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Anderson
Secretary of Agriculture



U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER Kansas Agricultural Experiment Station		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME KS940786-6-7	3. VARIETY NAME Overley
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) Waters Hall Kansas State University Manhattan, KS 66506		5. TELEPHONE (include area code) 785-532-6147	FOR OFFICIAL USE ONLY PVPO NUMBER 2004 00 205 FILING DATE May 6, 2004
		6. FAX (include area code) 785-532-6563	
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) University	8. IF INCORPORATED, GIVE STATE OF INCORPORATION	9. DATE OF INCORPORATION	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) Vernon A. Schaffer Agronomy Department Kansas State University 2004 Throckmorton Hall Manhattan, KS 66506			F E E S R E C E I V E D FILING AND EXAMINATION FEES: \$ 3652.00 DATE 5/06/2004 CERTIFICATION FEE: \$ 432.00 DATE 6/14/2004
11. TELEPHONE (Include area code) 785-532-6115	12. FAX (Include area code) 785-532-6094	13. E-MAIL VAS@KSU.EDU	
14. CROP KIND (Common Name) Wheat	16. FAMILY NAME (Botanical) Gramineae	18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION.	
15. GENUS AND SPECIES NAME OF CROP Triticum aestivum	17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$3,652), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act) <input checked="" type="checkbox"/> YES (If "yes", answer items 21 and 22 below) <input type="checkbox"/> NO (If "no", go to item 23) 21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED 22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED See Reverse (If additional explanation is necessary, please use the space indicated on the reverse.)	
23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO USA, Fall 2003 IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)	
25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF OWNER 		SIGNATURE OF OWNER	
NAME (Please print or type) Dr. Forrest Chumley		NAME (Please print or type)	
CAPACITY OR TITLE Assoc. Director, Ag Exp. Station	DATE 4/27/04	CAPACITY OR TITLE	DATE

(See reverse for instructions and information collection burden statement)

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$3,652 (\$432 filing fee and \$3,220 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvpo/pvp.htm>

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and provide evidence that name has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, 10301 Baltimore Avenue, Suite 401 NAL Building, Beltsville, MD 20705. Telephone: (301) 504-5682 <http://www.ams.usda.gov/seed.htm>.

ITEM

- 19a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) evidence of uniformity and stability; and (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;
 - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
 - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
20. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
23. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
24. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

22. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)

With owner's approval, unlimited generations of Foundation and two generations of Certified, otherwise one generation each of Foundation, Registered and Certified.

23. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

24. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

Overley

Exhibit A. Origin and Breeding History of the Variety

Overley (KS940786-6-7) is a hard red winter wheat selected from the cross U1275-1-4-2-2/Heyne'S'//Jagger. U1275 is a germplasm line from the USDA-ARS, Manhattan with the pedigree TAM-107*3/TA 2460. TA 2460 is an accession of *Aegilops tauschii* that carries the leaf rust resistance gene *Lr41*. Heyne is a hard white winter wheat released from the Kansas Agricultural Experiment Station and Jagger is a hard red winter wheat from KAES and is currently the leading variety in the state. The three-way cross was made in the greenhouse in Fall of 1993. The resulting F¹ plants were grown in the greenhouse in the Spring of 1994. Individual F¹ plants were harvested and F² seed from each individual F¹ plant was seeded into a 3-row plot in the Fall of 1994 at Manhattan, KS. The plot designated at X940786-6 was selected and harvest in bulk in the Summer of 1995. The F³ bulk was grown at Manhattan and harvested in bulk in the Summer of 1996. The F⁴ generation was then grown at Manhattan, KS for the 1997 crop year. Individual spikes were pulled from the F⁴ population and grown as head rows during the 1997 crop year. Overley was selected as a head row at Manhattan, KS in 1998 under the designation KS940786-6-7. In 1999, KS940786-6-7 was entered in the "short-row" yield trial, an unreplicated test grown at Manhattan and Hutchinson, KS. Based on performance, it was advanced to the "Preliminary yield trials" at Hutchinson and Manhattan in 2000. In 2001, KS940786-6-7 was tested in the Advanced Yield Trials at six sites across Kansas (Manhattan, Gypsum, Hutchinson, Hays, Colby and Tribune) and was advanced to the Kansas Intrastate Nursery, an elite test grown at 17 locations in Kansas in 2002. KS940786-6-7 was also entered in the KIN in 2003. This line was also tested in the Southern Regional Performance Nursery in 2002 and 2003 and was released as 'Overley' by the Kansas Agricultural Experiment Station in July of 2003.

Overley is uniform. Variants are limited to plants with white or light tan glumed color that occur at a frequency less than 1 in 200, taller plants at a frequency of a 1 in 5,000 and white kernel seed at a frequency less than 1 in 1,000. Roguing will continue to reduce or remove these variants.

Overley is stable. When sexually reproduced, the variety remains unchanged in the essential and distinctive characteristics. Overley was observed to be uniform and stable during the two generations prior to release.



Kansas State University

Department of Agronomy
Crop, Soil, and Range Sciences
K-State Research and Extension
2004 Throckmorton Plant Sciences Center
Manhattan, KS 66506-5501
785-532-6101
Fax: 785-532-6094

May 19, 2004

Mark A. Hermeling
Plant Variety Protection Office
NAL Building, Room 401
10301 Baltimore Ave
Beltsville, MD 20705-2351

Dear Mark:

Concerning your question on selection criteria on 'Overley', the early generations, F^2 and F^3 were grown in bulk. Individual spikes were pulled out of the F^4 population based on maturity, disease reaction and height. Overley was selected from one of these head rows using the same criteria.

If this does not answer your question, please feel free to contact me. Thanks for everything.

Sincerely,

A handwritten signature in black ink, appearing to read 'V.A. Schaffer', written over a horizontal line.

Vernon A. Schaffer
Assoc. Agronomist

VAS/dj

Kansas State University
Agricultural Experiment
Station and Cooperative
Extension Service

*"Knowledge
for Life"*

Overley

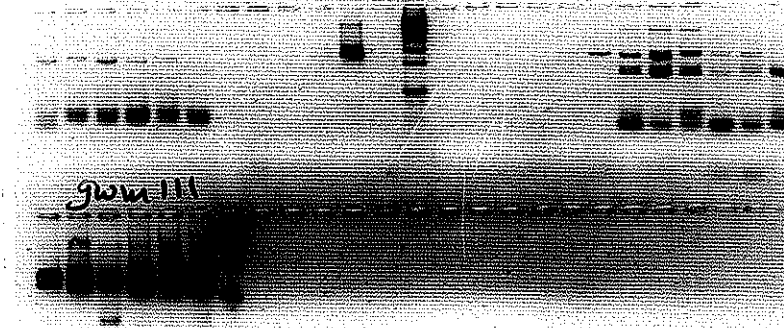
Exhibit B.

Statement of distinctness:

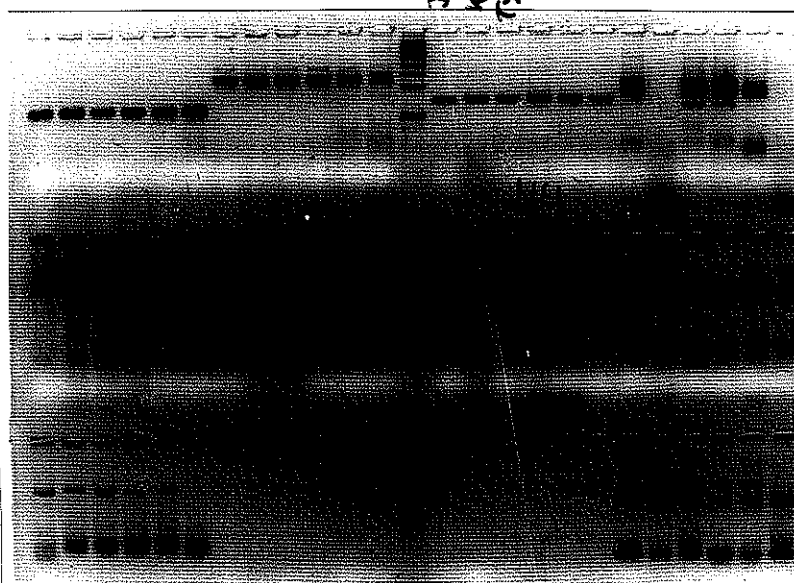
Overley most closely resembles the cultivar Jagger. Jagger and Overley differ in their genetic makeup for resistance to *Puccinia triticina* (leaf rust). Overley carries *Lr39*, a leaf rust resistance gene derived from *Aegilops tauschii*, while Jagger carried the leaf rust resistance gene *Lr17*. The testing for *Lr41* was carried out at Manhattan, KS by the personnel in the Department of Agronomy and the USDA-ARS Plant Science and Entomology Research Unit. The pedigree of Overley includes a line carrying *Lr41* from the *Aegilops tauschii* accession TA2460 in a TAM 107 background. A sister of Heyne and Jagger are also in the pedigree. The TAM 107, Heyne 'S' and Jagger are all susceptible to the race MCDL, while Overley and TA2460 are resistant. Additional evidence comes from screening with the race PNMQ. That race is virulent on *Lr41*, but is avirulent on *Lr17*, which is carried by Jagger. Overley is susceptible to PNMQ while Jagger is resistant. These results lead to the conclusion that Overley carries *Lr41*, but not *Lr17*. DNA markers determined to be closely linked to *Lr41* are also present in Overley (unpublished data).

Overley and Jagger are also distinguished by DNA microsatellite markers Xgwm296, Xgdm93 and Xcfd50. Please see the attached gel photographs.

200400205



EXPOSURE: 2.0 SEC. BLACK: 0 WHITE: 255 GAMMA: 1.05
DATE: 10-19-2002 TIME: 17:13 ID# 605-25189 FILE: (UNTITLED)



EXPOSURE: 1.0 SEC. BLACK: 0 WHITE: 255 GAMMA: 0.40
DATE: 10-19-2002 TIME: 17:10 ID# 605-25186 FILE: (UNTITLED)

REPRODUCE LOCALLY. Include form number and date on all reproductions.

Form Approved - OMB No. 0581-0055

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Agriculture, Clearance Officer, OIRM, AG Box 7630, Jamie L. Whitten Building, Washington, D.C. 20250. When replying, refer to OMB No. 0581-0055 and form number in your letter. Under the PRA of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT C
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (*Triticum* spp.)

NAME OF APPLICANT(S)	FOR OFFICIAL USE ONLY
Kansas Agricultural Experiment Station	PVPO NUMBER 2004 00 205
ADDRESS (Street and No. or RD No., City, State, and Zip Code)	VARIETY NAME
Waters Hall Kansas State University Manhattan, KS 66506	Overley
	TEMPORARY OR EXPERIMENTAL DESIGNATION KS940786-6-7

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g. or) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used:
Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND:

1=Common

2=Durum

3=Club

4=Other (SPECIFY):

2. VERNALIZATION:

1=Spring

2=Winter

3=Other (SPECIFY):

3. COLEOPTILE ANTHOCYANIN:

1=Absent

2=Present

4. JUVENILE PLANT GROWTH:

1=Prostrate

2=Semi-erect

3=Erect

5. PLANT COLOR (boot stage):

1 = Yellow-Green

2 = Green

3 = Blue-Green

6. FLAG LEAF (boot stage):

1 = Erect

2 = Recurved

1 = Not Twisted

2 = Twisted

7. EAR EMERGENCE:

Number of Days Earlier Than Jagger

Number of Days Later Than

8. ANTHOR COLOR:

1 = Yellow

2 = Purple

9. PLANT HEIGHT (from soil to top of head, excluding awns):

cm Taller Than Jagger

cm Shorter Than

* Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial

10. STEM:

A. ANTHOCYANIN

1 = Absent

2 = Present

B. WAXY BLOOM

1 = Absent

2 = Present

C. HAIRINESS (last internode of rachis)

1 = Absent

2 = Present

D. INTERNODE (SPECIFY NUMBER)

1 = Hollow

2 = Semi-solid

3 = Solid

E. PEDUNCLE

1 = Absent

2 = Present

cm Length

11. HEAD (at Maturity):

A. DENSITY

1 = Lax

2 = Middense

3 = Dense

B. SHAPE

1 = Tapering

2 = Strap

3 = Clavate

4 = Other (SPECIFY):

C. CURVATURE

1 = Erect

2 = Inclined

3 = Recurved

D. AWNEDNESS

1 = Awnless

2 = Apically Awnletted

3 = Awnfletted

4 = Awned

12. GLUMES (at Maturity):

A. COLOR

1 = White

2 = Tan

3 = Other (SPECIFY): Brown

C. BEAK

1 = Obtuse

2 = Acute

3 = Acuminate

B. SHOULDER

1 = Wanting

2 = Oblique

3 = Rounded

4 = Square

5 = Elevated

6 = Apiculate

D. LENGTH

1 = Short

2 = Medium

(ca. 7mm)

(ca. 8mm)

3 = Long (ca. 9mm)

12. GLUMES (at Maturity) *Continued*:

2004 00 205

E. WIDTH

☐ 2 1 = Narrow (ca. 3mm) 2 = Medium (ca. 3.5mm)
3 = Wide (ca. 4mm)

13. SEED:

A. SHAPE

☐ 1 1 = Ovate 2 = Oval 3 = Elliptical

C. BRUSH

☐ 1 1 = Short 2 = Medium 3 = Long
☐ 1 = Not Collared 2 = Collared

B. CHEEK

☐ 1 1 = Rounded 2 = Angular

D. CREASE

☐ 2 1 = Width 60% or less of Kernel
2 = Width 80% or less of Kernel
3 = Width Nearly as Wide as Kernel

☐ 1 1 = Depth 20% or less of Kernel
2 = Depth 35% or less of Kernel
3 = Depth 50% or less of Kernel

E. Color

☐ 3 1 = White 2 = Amber 3 = Red
4 = OTHER (Specify)

G. PHENOL REACTION (*see instructions*):

☐ 4 1 = Ivory 2 = Fawn
3 = Light Brown 4 = Dark Brown
5 = Black

F. TEXTURE

☐ 1 1 = Hard 2 = Soft

14. DISEASE: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

☐ 2 Stem Rust (*Puccinia graminis* f. sp. *tritici*)

☐ 1 Leaf Rust (*Puccinia recondita* f. sp. *tritici*)

☐ 2 Stripe Rust (*Puccinia striiformis*)

☐ 0 Loose Smut (*Ustilago tritici*)

☐ 2 Tan Spot (*Pyrenophora tritici-repentis*)

☐ 0 Flag Smut (*Urocystis agropyri*)

☐ 0 Halo Spot (*Selenophoma donacis*)

☐ 0 Common Bunt (*Tilletia tritici* or *T. laevis*)

☐ 2 *Septoria nodorum* (Glume Blotch)

☐ 0 Dwarf Bunt (*Tilletia controversa*)

☐ 0 *Septoria avenae* (Speckled Leaf Disease)

☐ 1 Karnal Bunt (*Tilletia indica*)

☐ 2 *Septoria tritici* (Speckled Leaf Blotch)

☐ 1 Powdery Mildew (*Erysiphe graminis* f. sp. *tritici*)

☐ 1 Scab (*Fusarium* spp.)

☐ 0 "Snow Molds"

14. Disease (Continued) (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

<input checked="" type="checkbox"/> 2 "Black Point" (Kernel Smudge)	<input type="checkbox"/> 0 Common Root Rot (<i>Fusarium</i> , <i>Cochliobolus</i> and <i>Bipolaris</i> spp.)
<input type="checkbox"/> 1 Barley Yellow Dwarf Virus (BYDV)	<input type="checkbox"/> 0 Rhizoctonia Root Rot (<i>Rhizoctonia solani</i>)
<input type="checkbox"/> 2 Soilborne Mosaic Virus (SBMV)	<input type="checkbox"/> 0 Black Chaff (<i>Xanthomonas campestris</i> pv. <i>translucens</i>)
<input type="checkbox"/> 2 Wheat Yellow (Spindle Streak) Mosaic Virus	<input type="checkbox"/> 0 Bacterial Leaf Blight (<i>Pseudomonas syringae</i> pv. <i>syringae</i>)
<input type="checkbox"/> 4 Wheat Streak Mosaic Virus (WSMV)	<input type="checkbox"/> Other (SPECIFY)
<input type="checkbox"/> Other (SPECIFY)	<input type="checkbox"/> Other (SPECIFY)
<input type="checkbox"/> Other (SPECIFY)	<input type="checkbox"/> Other (SPECIFY)
<input type="checkbox"/> Other (SPECIFY)	<input type="checkbox"/> Other (SPECIFY)

15. INSECT: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

<input type="checkbox"/> 1 Hessian Fly (<i>Mayetiola destructor</i>)	<input type="checkbox"/> Other (SPECIFY)
<input type="checkbox"/> 0 Stem Sawfly (<i>Cephus</i> spp.)	<input type="checkbox"/> Other (SPECIFY)
<input type="checkbox"/> 0 Cereal Leaf Beetle (<i>Oulema melanopa</i>)	<input type="checkbox"/> Other (SPECIFY)
<input type="checkbox"/> 1 Russian Aphid (<i>Diuraphis noxia</i>)	<input type="checkbox"/> Other (SPECIFY)
<input type="checkbox"/> 1 Greenbug (<i>Schizaphis graminum</i>)	<input type="checkbox"/> Other (SPECIFY)
<input type="checkbox"/> 0 Aphids	<input type="checkbox"/> Other (SPECIFY)

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS

Overley

Exhibit D. Additional description

Overley is a bronze chaffed, semi-dwarf hard winter wheat. It is medium in height with very good straw strength and excellent yield potential. Overley is early maturing with fair to good winter hardiness. It is resistant to Wheat Soil Borne Mosaic Virus, Wheat Spindle Streak Mosaic virus, leaf rust and stripe rust. It is also moderately resistant to stem rust, speckled leaf blotch and tan spot. It is moderately tolerant to tolerant to acid soils and is also moderately tolerant to wheat streak mosaic virus. Overley is susceptible to Fusarium head blight and Hessian fly. It is best adapted to central Kansas and Oklahoma.

Overley has excellent milling and baking properties. Kernel diameter, as measured by SCKS, has typically been 0.2 mm greater for Overley when compared to Jagger. Due to its large seed, Overley has had higher flour yields at lower ash contents than Jagger when grown in its area of adaptation. In four years of bake tests, the flour protein content of Overley has been slightly lower to equal to Jagger. Mix times for Overley have been up to a minute longer than Jagger with superior mixing tolerances. Mixograph absorptions for Overley have typically had higher loaf volume and similar crumb grain scores when compared to Jagger. That data from 2001 and 2003 suggests that Overley holds its quality better than Jagger in marginal protein environments.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

1. NAME OF APPLICANT(S) Kansas Agricultural Experiment Station	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER KS940786-6-7	3. VARIETY NAME Overley
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) Waters Hall Kansas State University Manhattan, KS 66506	5. TELEPHONE (Include area code) 785-532-6147	6. FAX (Include area code) 785-532-6563
7. PVPO NUMBER 2004 00 205		

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain. ☒ YES ☐ NO9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country. ☒ YES ☐ NO10. Is the applicant the original owner? ☒ YES ☐ NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES ☐ NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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